Borough of Barnsley.

REPORT

OF THE

SANITARY CONDITION OF BARNSLEY

IN 1904,

SUBMITTED TO THE TOWN COUNCIL,

BY

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OXON.,

Medical Officer of Health,

17TH MARCH, 1905.

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BOROUGH OF BARNSLEY.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the Year 1904.

To the Sanitary Committee of the Town Council.

Gentlemen,

Meteorology.

The year 1904 was, except in the matter of rainfall, a fairly average year. July was a pleasantly hot month, without the excessive heat of July, 1901; August began and ended with a week of hot weather, separated by a cooler, rather rainy, fortnight. The warm weather continued during the early part of September, after which the temperature gradually diminished. On the 21st of November there was a heavy snowstorm, which seemed to have an influence in diminishing the amount of Scarlet Fever notified. December was characterised by alternate periods of hot and cold weather, which was exceptionally trying to old people, and may have produced the epidemic of Influenza which established itself towards the end of the month.

The rainfall was well up to the average to the end of August, by which time nearly 20 inches had fallen; but during the last four months of the year, although rain fell on nearly half the days (57 out of 122), the total amount was so small that only your new reservoir at Midhope saved the town from a serious shortage of water. The rainfall of the whole year was 23·64 inches, or more than 3 inches below the average of the past 36 years.

The days on which $\frac{1}{100}$ of an inch or more rain fell were 192, (5 above the average).

The number of hot days on which the thermometer registered 70° F. or more was 36, exactly the average number.

Warm days on which the thermometer registered 50° F. or more were 234 in number, or 11 above the average.

The days of frost when the thermometer fell to 32° F., or less, numbered 54 (3 above the average).

On 58 days (or five above the average) the 4 foot earth thermometer registered 56° F. The maximum reading given by this thermometer was 59·2° F. on August 6th and 7th.

Although there was no very marked feature about 1904, as compared with the excessive rainfall of 1903, the rainy fortnight in the middle of August, the snowstorm in November, and the alternations of cold and warmth in December had important influence on the death-rate of the Borough.

General Statistics.

The total number of deaths registered in the Borough of Barnsley was 850, or 7 less than the average of the last ten years. Of these deaths 129 were in Public Institutions. Sixty-seven of these 129 deaths were among persons belonging to other districts, and therefore are deducted from the 850; but 34 deaths of persons belonging to Barnsley, who died in Public Institutions outside the Borough, have to be added, so that the nett number of deaths was **817**, or 28 less than last year, and 3 less than the average of the last 10 years.

I am now asked to make my estimate of the population of Barnsley at the beginning of the year, instead of the end, when the number of new houses built during the year is known. In January, 1904, I therefore estimated that there would be living in Barnsley on June 30th **43,700** people. I am inclined to think from the building returns that this may be an over-estimate, and that this figure is more nearly true of December 31st. Since the birth-rate calculated on this estimate is only 1·38 below the average for the last 10 years, and is 6·5 higher than the birth-rate for England and Wales as a whole, I have retained the 43,700 for the purpose of all the statistics calculated in this report.

As all the new houses built are outside the special area, I think that 10,000 persons is probably once more a fairly accurate estimate for the population of that area.

Death Rates.

The nett death-rate for 1904, for Barnsley as a whole, was **18·69.** This is 1·9 below the average for the last 10 years, but does not compare well with the death-rate for England and Wales (16·2), nor with that for the 76 great towns (17·2). The death-rate for the 103 smaller towns is probably the figure with which we ought to make comparisons, and that is only 15·6, so that there is considerable leeway to make up. On the other hand with our high birth-rate it is to be remembered that there is a proportionately large infant population, among which, even in Rural England and Wales, 1 in 8 dies.

The death-rates for the special area, and for the remainder of Barnsley, I have not been able to correct, because the residence of those persons dying in Public Institutions is not indicated in the returns which I receive, further than that they belong (*a*) to Barnsley, or (*b*) to some other township outside the Borough.

Excluding therefore deaths in Public Institutions during 1904, 159 deaths were registered in the special area, and 562 in the rest of the town, giving death-rates of 15·9 for the special area, and 16·67 for the rest of the town.

Birth Rate.

The births were 1,506 in number, or **34·46** per 1,000 of the population. This birth-rate is lower than the average for the last 10 years in Barnsley, but is considerably higher than that for England and Wales (27·9), or the birth-rate 29·1 of the 76 large towns, and the 27·5 of the 142 smaller towns. One hundred and eleven of the births, or rather more than 7 per cent., were illegitimate. Of the 817 deaths, 275, or 33·65 per cent., were among infants; while 406, or 49·69 per cent., were among children under 5 years. In 1903 there were 276 deaths among infants, and 414 among children under 5.

Deaths among Children.

In the special area 65 of the deaths were among infants, and 91 among children under 5 years. The former number is a little above the due proportion, and the latter number almost exactly the proportionate number.

Infant Mortality.

The Infant Mortality, or deaths of children under 1 year per 1,000 births registered, was **182·6,** as compared with 175·24 in 1903. This increase per 1,000 births is due almost entirely to the fact that fewer births were registered in 1904 than in 1903; but the 80 deaths of infants from Diarrhœa, as compared with 53 in 1903, show where the diminution of this heavy mortality might be obtained.

For purposes of comparison, the infant mortality in England and Wales as a whole, for 1904, was 146; the infant mortality in the 76 great towns was 160; and in the 103 smaller towns 154.

Zymotic Diseases.

The deaths from the seven principal zymotic diseases were 193 in number, of which 46 were in the special area.

The zymotic death rate for 1904 is therefore 4·42, which does not compare well with 1·94 for England and Wales, 2·49 for the 76 great towns, and 2·02 for the 103 smaller towns.

Notifications of Infectious Diseases.

During the year there were received 559 notifications of Infectious Diseases. Of these 72 were cases of Chicken pox, a disease made notifiable on the 11th May, 1904, because of the serious nature of the Small-pox epidemic. The number of notifications, comparable with the number in 1903, is therefore 487. In 1903 there were 293 notifications.

Taking the diseases in detail, there were 89 notifications of Small-pox, an increase of 51 compared with 1903; 55 of Diphtheria, an increase of 3; 1 of Membranous Croup, the same as in 1903; 38 of Erysipelas, an increase of 5; 222 of Scarlet Fever, an increase of 117; 78 of Enteric Fever, an increase of 20; 4 of Puerperal Fever, a decrease of 3. Of the 559 notifications 128 were in the special area, 431 in the rest of the town, the numbers being precisely proportionate to the estimated population in each part of the town.

Small-pox.

Of the 89 cases of Small-pox, 16 were from the special area, and 73 from the rest of the town, which suffered a little more heavily than the special area.

The cases may be roughly divided into two epidemics, and more or less isolated importations.

The two epidemics started on May 3rd and November 15th respectively, and both were caused by overlooked cases. The first epidemic was started by a travelling tailor, who was at first supposed to be suffering from Chicken-pox; the second by a travelling grocer, who had a mild attack of Small-pox, and did not send for any doctor. Why the contacts of these cases should have been particularly obstinate and perverse in refusing re-vaccination is a mystery, but so it was.

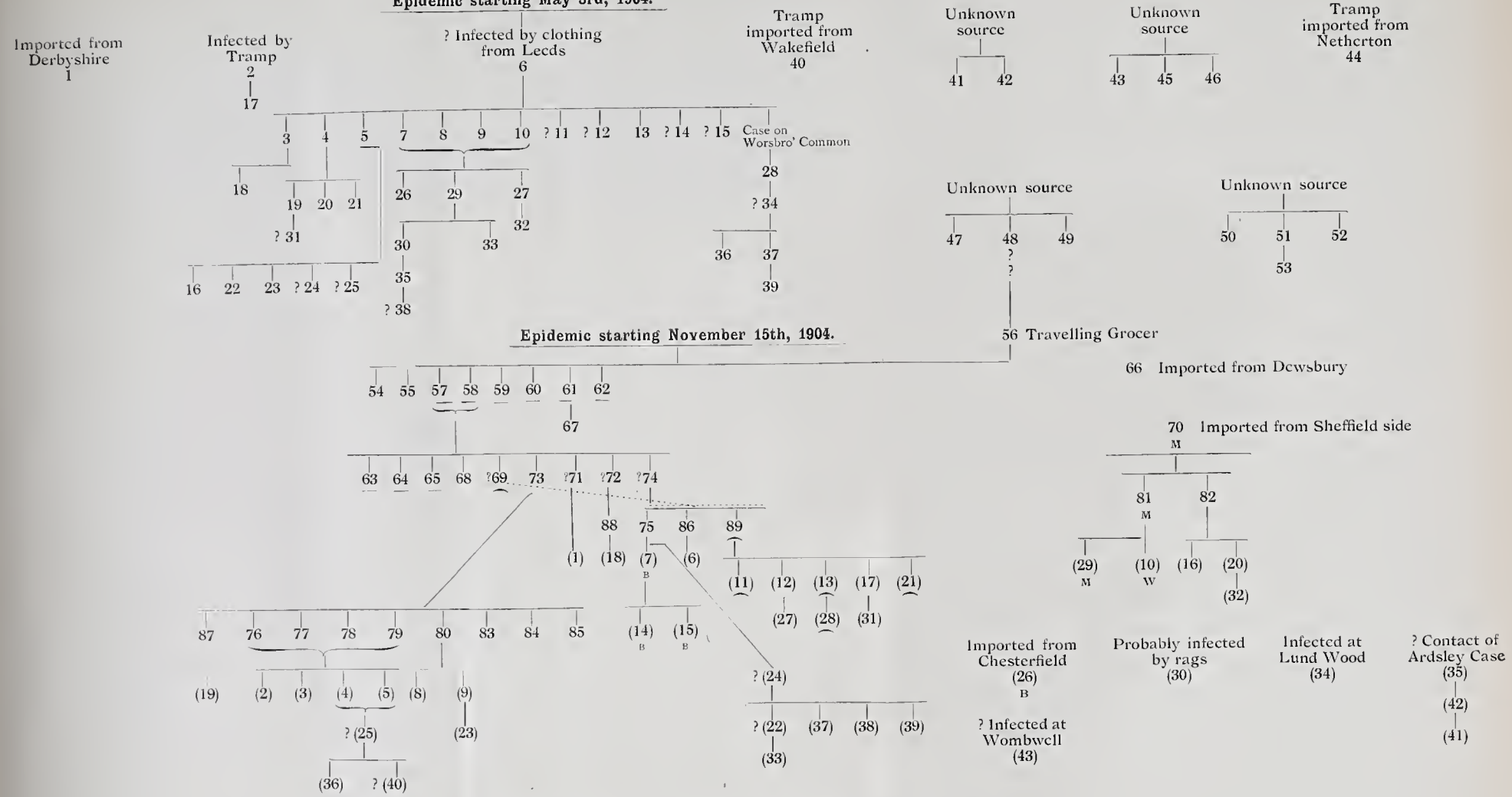
From the accompanying diagram it will be seen that, before the earlier epidemic, there were two separate importations of Small-pox, the second importation giving rise to 1 secondary case. No. 6, who started the epidemic, began to be ill before either of these cases, and therefore could not have been infected by either of them. After the first epidemic there were two isolated cases that came into the town from outside districts, and four groups of cases, the primary cases in each group being infected about the same time, and therefore probably due to the same untraced source of infection. One of the cases in these groups (51) produced a secondary case (53), and it is just possible that a case in one of the other groups (48) infected case 56, the travelling grocer, who started the second epidemic.

As Small-pox epidemics do not respect the calendar, but overflow from one year into another, I have completed the diagram to February 24th, 1905 (case 43), after which the epidemic ceased.

I here reproduce part of my special report on this second epidemic:—

The present epidemic of Small-pox dates from November 15th, 1904, when the 54th case of the year was isolated. This case appeared at the time to be possibly connected with a case isolated on October 31st, but it was impossible to connect the 55th case with any previous known case, so I made careful

DIAGRAM OF SMALL-POX EPIDEMICS, MAY 3RD, 1904, TO MARCH 17TH, 1905.



The numbers correspond to the numbers in the Notification Register.
Numbers in brackets are cases notified in 1905.

Underlining: — 1st Lodging-house in Sheffield Road.
‿ 2nd ,, ,, in Doncaster Road.
B 3rd ,, ,, in Baker Street.
M 4th ,, ,, in Baker Street.
W 5th ,, ,, in Wilson Street.

investigation and found that the husband of case 54 and son-in-law of case 55 had been ill about three weeks previously, without sending for a doctor, and had recovered his health. On examination I found that this man had undoubtedly had Small-pox in a mild form, and we isolated him on November 22nd (case 56). Unfortunately he had been infectious for three weeks, and, being a grocer, had infected the inmates of a lodging-house opposite his shop, who came across for "pennorths" of this, that, and the other; and from this lodging-house cases 57, 58, 59, 60, 61, and 62 were isolated between November 24th and December 3rd, all infected by 56. The first two of these cases, 57 and 58, infected three further lodgers in the same house, 63, 64, and 65, and a woman (68) living in a house whose back yard adjoined the back yard of the lodging-house, and unfortunately also a young man (73) who habitually made use of a passage running beside the lodging-house on the way to his work. To this case I shall presently recur, as he and the obstinacy of his relations and friends produced 16 further cases. There is also a very great probability that the lodging-house cases 57 and 58 infected cases 69, 71, 72, and 74. It is exceedingly difficult in most cases to get evidence of actual contact. For instance, the uncle of a case at Lund Wood strenuously and persistently denied that he knew anything about his niece, while the niece, a respectable woman, left no doubt in my mind that the man was her mother's brother. But I am satisfied that it was easily possible for all these four cases to have been infected by the above lodging-house cases. There is definite evidence that case 61 (a lodging-house case) infected case 67, for being infectious, she bought a penny stamp off him at his shop, 12 days before he started with the disease. There is equally good evidence that case 71 infected case (1) of 1905, and that case 72 infected case 88, who infected case (18) of the present year. Cases 73 and 74 have had even worse consequences. Case 73, referred to above, was one of a large family with many connections. All his known contacts were pressed by every means known to us to be re-vaccinated. But no! they didn't believe in re-vaccination, they thought they might not get Small-pox, they would take their chance, and so, to the number of 16, they were isolated at Lund Wood, and the father was fortunate to escape with his life. The cases 76, 77, 78, 79, 80, 83, 84, 85, 87, and (2), (3), (4), (5), (8), (9), and (19) of the present year are all his relations, or his neighbours and their relations The accompanying diagram shows the course of the infection. Case 74 was a man living in Joseph Street who was only less disastrous to the town than case 73. Case 74 was ill seven days before he was notified and isolated, and cases 75 and 86 (who was a relation) were infected by him, and probably also case 89;

though this last case may owe his infection to case 69, as shewn by the dotted line in the diagram. Case 75 infected (7) of this year, who infected (14) and (15), all residents in another lodging-house. Case 89 infected (11), (13), and (21) of this year in his lodging-house, as well as (12) and (17). To complete the story, case 66 was imported direct from Dewsbury, but thanks to re-vaccination gave rise to no secondary cases. Case 70, imported from the Sheffield side, infected case 81 in the same lodging-house, who in turn infected case (10) of this year. Case 70 also infected case 82, who infected cases (15) and (20) of this year. To sum up, 49 of the above cases were the direct or indirect descendants of a concealed case, one was an importation from Dewsbury, and five were derived from an importation from the Sheffield side.

I will recapitulate once more our routine of disinfection in Small-pox cases. First, all the bedding and everything in the bedrooms of an infected house are taken to be disinfected in a Thresh's steam disinfector, while the bedrooms are sprayed with formalin solution. When the bedding comes back from the disinfector, the contacts, who have been effectually kept downstairs by the awful smell of the formalin, take off their clothes, and are persuaded to wash their exposed hands and faces, and go to bed in disinfected night shirts ; the clothing is then taken to be disinfected while the downstairs rooms are sprayed with formalin solution, and the disinfected clothes are brought back in time for the contacts to dress next morning. Where the contacts consent to be re-vaccinated, this is a perfectly efficient method of disinfection, when carried out and supervised by as competent a person as your present Sanitary Inspector. If contacts refuse to be re-vaccinated, personal infection is bound to continue, whatever steps are taken for washing the contacts, and this will be the case until compulsory powers to re-vaccinate are given to Sanitary Authorities.

Meanwhile we tried to induce people to be re-vaccinated by distributing the annexed handbill,* and the Jenner Society's pictures of patients suffering from Small-pox.

The provision of a temporary disinfecting station, and the assistance kindly given by the Education Committee in getting school children re-vaccinated, in all cases where the protection of the primary vaccination was likely to have ceased, belong properly to the current year ; but I would here remark that two days after the disinfecting station was started, we were able to turn into it over 50 people from two lodging-houses, bath them, and while they were waiting for their clothes, examine every one of them for any indication of Small-pox. Further, that whether it was due to the extensive re-vaccination,

* See Appendix.

or to the disinfecting station, or both combined, the epidemic began to decline from the time the disinfecting station was available.

Case Fatality.

Of the 89 cases of Small-pox 5 died, giving a case fatality of 5·6 per cent., or precisely the same as in 1903. Of the 5 who died 3 were unvaccinated children under two years, one was an unvaccinated man of 66, and one was a man 36 years old who had been vaccinated in infancy (1 scar, area $\frac{1}{4}$ square inch).

Age Incidence.

As in 1903 the larger proportion of the cases had been vaccinated once in infancy, and had lost that protection, 18 were under 15, and 71 over 15.

Of the 18 children under 15 years of age, 9 were unvaccinated, 6 had one vaccination scar, 1 two vaccination scars, 1 three vaccination scars, and 1 four vaccination scars.

The 6 "one spot" cases are interesting as showing how evanescent is the protection of such vaccination; the ages of 6 children being $1\frac{4}{12}$, $2\frac{1}{2}$, 3, 4, 6, and 12 years respectively.

Of the older persons, 11 were from 15 to 25 years, 58 from 25 to 65 years, and 2 over 65 years.

All cases of Small-pox were removed promptly to Lund Wood Hospital, and my thanks are due to the medical men in the town for the assistance they have given me by prompt notification of Small-pox cases. The telephones at my house and at the Sanitary Depôt have been invaluable in this respect.

Scarlet Fever.

222 cases of Scarlet Fever were notified during the year, or 117 more than in 1903. This increase I anticipated in my annual report last year, and it is probable that there will be an even greater number of Scarlet Fever cases in 1905. 50 of the 222 cases were from the special area, and 172 from the rest of the town, or about the due proportion from each area.

142 of the cases were removed to the Kendray Hospital, and the remaining 80 were nursed at home.

Of the former 3 died, a case fatality of 2·11 per cent.; of the latter 8 died, a case fatality of 10 per cent.

28 per cent. of the cases were children under 5 years, and the remainder over that age.

Table B is of considerable interest in this connection.

Scarlet Fever was most prevalent in June, July, and October, but at the end of October a sudden drop in the number of cases notified took place, and comparatively few cases were notified in November and December.

Diphtheria and Membranous Croup.

55 cases of Diphtheria and 1 of Membranous Croup were notified in 1904, or 4 more cases than in 1903. 7 of these cases were in the special area, and 49 in the rest of the town. The rest of the town, therefore, had nearly 16 cases more than its

due proportion. There was no special connection of the cases, at any time of the year, with any particular school or milk supply. There were 28 cases in the first 5 months of the year, and 15 cases in July and August, since which time there has been only an occasional case.

28 of the cases were removed to the Kendray Hospital. Of these cases 2 died, or 7·1 per cent.

Of the 28 cases nursed at home 7 died, or 25 per cent.

The Diphtheria ward at the Kendray Hospital has, therefore, so far justified its existence, so far as Barnsley is concerned.

Erysipelas. Of 38 cases of Erysipelas, 6 were from the special area, and 32 from the rest of the town. As in 1903, three of the cases proved fatal, but none of the cases seems to call for special comment.

Puerperal Fever. 4 cases of Puerperal Fever were notified, 3 in the special area, and 1 in the rest of the town. None of the cases proved fatal, and there was no evidence of any conveyance of infection from case to case by midwives.

Typhoid Fever. Notifications of 78 cases of Typhoid Fever were received during the year, 30 from the special area, and 48 from the rest of the town, the special area having twice as many cases as it should have had.

One of the cases was removed to the Kendray Hospital from a caravan in Gas Nook, when it was uncertain whether the case was Typhoid Fever or Pneumonia. It turned out to be the latter, so the remaining 77 cases only are dealt with in the following :—

22 of the cases were notified in the first half of the year. Between two of the cases, notified in February and March respectively in Shambles Street, a direct connection could be traced ; but for the rest, there was no particular sequence, nor was any one part of the town specially affected. The 55 cases of the second half of the year do admit of some grouping as regards 27 of the cases.

A baby of 6 months was notified on August 30th as suffering from Typhoid Fever at 10, Locke Street, a case having been notified from 8, Locke Street on April 7th.

3 cases were notified from Thomas Street on August 12th, August 20th, and September 3rd. Two of the houses affected were in Upper Thomas Street, on opposite side of the road, and one in Lower Thomas Street.

5 cases were notified in New Street and the courts off New Street, but here again the five houses involved were separated by some distance from each other.

2 cases in Rockingham Square and Park Square, 2 more cases on opposite sides of Canning Street, 4 cases in Blucher Street, and 2 in Nelson Street, were all fairly near each other. Further, the 2 cases in Nelson Street were in the same house, one infected by the other, and 3 of the cases in Blucher Street were in the same house, the first one infecting the two others. But there was no evidence of a common cause for the 7 primary cases. There were three other family groups—3 cases in Hopwood Street, 2 cases in John Edward Street, and 3 cases in Eldon Street and Harbro' Hill Road. Considering the usual course of events, after a hot summer, with a large amount of Diarrhœa, this was really quite a moderate amount of Typhoid Fever, and on the strength of past experience I certainly expected a good deal more. Unfortunately, the Typhoid Fever was of a severe type, with many cases of severe hæmorrhage from the bowel, so that 8 of the 50 cases removed to the Kendray Hospital died (I omit the Pneumonia, notified as Typhoid, which recovered), and 11 of the 27 cases nursed at home died. The case fatality of the 50 cases nursed at the Kendray Hospital was therefore 16 per cent., and the case fatality of the 27 nursed at home was 40·7 per cent.

Apart from the heavier incidence of the disease on the special area which has already been mentioned, the special liability of houses with privy ashpits, as compared with houses with water closets and waste-water closets, is very marked. 57 of the cases were in "privy" houses, and 20 cases in "w.c." or "w.w.c." houses. In consequence of substitution of waste-water closets and dry ashpits for privy ashpits, and the building of new houses on the water-carriage system, I believe it is reasonable to estimate that half the population of Barnsley is served by each system. It follows that the "privy house" produced nearly 3 times as many cases of Typhoid Fever as it ought to have done.

Diarrhœa.

Of the infectious diseases which are not notifiable under the Notification Act, Diarrhœa caused the greatest number of deaths, 99 in all. The hot weather in July raised the temperature of the subsoil at a depth of 4 feet to 56° F. on July 13th, and this temperature increased to a maximum of 59·2° F. on August 6th and 7th. The rainy weather that followed reduced the subsoil temperature, till on August 25th it fell below 56°, only to be raised to the critical temperature again by the hot days at the end of August. From August 31st to September 14th the 4 ft. earth thermometer registered 56° F., or a little over. Under these conditions Diarrhœa has always been prevalent in Barnsley. The combination of a high maximum subsoil temperature followed by a heavy rainfall, followed in turn by more hot weather, seem to have produced the conditions most favourable for epidemic diarrhœa. Of the 99 deaths all

are certainly not due to epidemic diarrhœa, but the 10 deaths in July, the 64 deaths in August, and the 14 in September certainly were, and probably also the 5 in October.

32 or nearly a third of the deaths were in the special area, and 67 in the rest of the town. There was no particular incidence on any one street or set of streets, but the privy ashpit, as in the case of Typhoid Fever, comes out with a bad record ; 73 of the deaths being in privy ashpit houses, and 26 in houses with water closets or waste water closets. That moiety of the population which lives in the former class of house, suffered nearly three times as heavily as it should have done. In this connection I think it may interest you to have the table in my special report of November 24th, 1902, brought up to date :—

YEAR.	Deaths from Diarrhœa.			
	Occurring in Water Carriage Houses.	Expected if proportionate in Privy Ashpit Houses.	Actually Occurring in Privy Ashpit Houses.	Excess of Deaths in Privy Ashpit Houses above number expected.
1897	13	39	98	59
1898	11	22	65	43
1899	20	30	48	18
1900	18	27	55	28
1901	17	26	70	44
1902	6	9	47	38
1903	14	21	48	27
1904	26	26	73	47
			Total excess in 8 years ...	304

But for these "excess" deaths from Diarrhœa alone, the Barnsley death rate of 1904 would have been 17·39 instead of 18·69.

A quotation from my father's annual report of exactly 30 years ago will adequately sum up the situation :—

"It will be desirable to encourage the substitution of water closets for privies in the town, and perhaps even to refuse to sanction the erection of any new privies." *

How matters are progressing in this respect will be evident from the above table, for whereas in 1897 two-thirds of the population were on the privy ashpit system, now only one-half the population is so served.

* "The Report addressed to the Barnsley Corporation in February, 1875, by Michael Thomas Sadler, B.A. and M.D., Lond., &c., Medical Officer of Health."

If the rate of progress is to be increased, it clearly must be in consequence of, and not in anticipation of, an improved state of public opinion.

The vexed question of the waste-water closet, or Duckett, as a sanitary convenience is now freely discussed in Barnsley, sometimes, I fear, with a view to retard progress. I should like, therefore, to record the advantages and disadvantages of this form of convenience.

In theory, postulating a proper and intelligent use of each class of convenience, the earth closet and the water closet are the best; then comes the waste-water closet for towns where water is plentiful but expensive, and the privy ashpit for the country. The pail system is in theory, I think, last and worst.

When it comes to practice, the postulate of proper and intelligent use is just the very thing that a sanitary authority cannot count on. A sanitary convenience has not only, like a motor car, to be "fool proof," but as far as possible also "mischief proof"; and further, it must be frost proof, and need the minimum of supervision. It is when we come to consider the various forms of closet from this point of view that a careful balance between advantages and disadvantages has to be made.

(1.) The earth closet is theoretically the best closet of all, for when it is in proper working order it is free from smell, and the proper admixture of earth with the excrement results in a product which is odourless (Sir Richard Thorne-Thorne used to pass bottles of it round for his class to smell), and a valuable fertilizer. Further, it is said that this odourless product can be utilized in place of fresh earth for mixing with the excrement, so that the question of sewage disposal is immensely simplified.

But to keep an earth closet in order takes two men and a boy, and they have to be kept up to their work. For the country houses of wealthy people there is nothing better, but for cottage property in a town this system is, I think, quite out of the question.

(2.) There remain the water-carriage systems, and the pail and privy ashpit systems.

The pail system I need not discuss, as it is not in use in Barnsley; though I may say that other towns have found it more healthy than the privy ashpit, and less healthy than the water-carriage system.

(3.) The privy ashpit system is tolerable for isolated country cottages, if the privy is far enough from the house.

In theory, if the ashpit is kept dry (*i.e.*, free from any addition of water except urine), and the cinders from the fires are regularly riddled over the excrement, and *if* kitchen waste is

burnt behind the kitchen fire, and not thrown into the ashpit, the resulting mixture of ashes and excreta is nearly as good as the product of the earth closet.

But in practice slops and kitchen refuse *are* thrown into the ashpits, the cinders are *not* riddled, because it is too much trouble, the riddles themselves are broken or destroyed, the doors to the ashpits are taken off their hinges, and children play about in close proximity to the resulting offensive mass. All this translates itself into increased incidence of epidemic Diarrhœa and Typhoid Fever on "privy" houses.

(4.) Lastly there is the choice between the water closet and the waste-water closet. The waste-water closet of to-day is admittedly inferior to the water closet from a public health point of view, because of the fouling of the pedestal, but it is infinitely superior to the privy ashpit for that class of property where 3 houses use the same convenience. The difficulties in the way of universal water closets are as follows:—(i) the cost of the water; (ii) the frost difficulty where the water closet has to be outside the houses. If you meet (ii) by the Manchester plan of placing the water cistern inside the house living-room, and the water closet against the outside wall, it involves (*a*) a water closet to each house, thus raising the financial difficulty again, and (*b*) an undesirable connection between the closet and the living-room of the house; (iii) a third and insuperable difficulty also prevailed in Barnsley before the Midhope Reservoir was available, and that was lack of sufficient water.

In regard to mischief I think both kinds of closet are equally vulnerable, but the automatic flushing of the waste-water closet renders it practically "fool proof." The fouling of the pedestal of a waste-water closet might be met by a design admitting of the periodical flushing of a series of pedestals by the sanitary officials. In the meanwhile the substitution of the water carriage system for privy ashpits is as desirable as it was 30 years ago.

Measles.

The epidemic of Measles, which was so serious in 1903, abated during January, and was practically at an end by the middle of February. After that date, there were only 5 deaths from measles registered during the rest of the year, 2 in March and 1 each in April, July, and October.

Whooping Cough.

As is usual, the epidemic of Measles was followed in 1904 by a considerable prevalence of Whooping Cough, 20 deaths being registered from this cause in the months of May, June, July, and August. In September the epidemic began to abate, and only one death was caused by this disease in October, and one in December.

There were 27 deaths in all from Whooping Cough during the year, of which 4 were in the special area.

Influenza.

Only 3 deaths were certified as being due to Influenza during the year, but there was a very considerable prevalence of this disease in December, especially towards the end of the month, though it was mostly of a mild type. The snowstorm in November, and alternations of warm and cold weather in December, were apparently the cause of this prevalence.

Kendray and Lund Wood Hospitals.

The feature of 1904 with regard to your Infectious Diseases Hospitals has been the record number of cases admitted; 105 cases at Lund Wood Small-pox Hospital, and 628 cases at the Kendray Hospital, where we isolate Scarlet Fever, Typhoid Fever, and Diphtheria. Of these 628 cases, 462 were Scarlet Fever, 91 Typhoid Fever, and 75 Diphtheria. 143 of the Scarlet Fever cases, 51 of the Typhoid cases, and 28 of the Diphtheria cases were from Barnsley, as were 89 of the cases of Small-pox isolated at Lund Wood.

There were 12 deaths from Scarlet Fever, or a case fatality of 2·6 per cent. (compare the case fatality—10·1 per cent.—of those Barnsley cases nursed at home).

13 of the Typhoid Fever cases died, giving a case fatality of 14·2 per cent.

7 of the Diphtheria cases died, giving a case fatality of 9·3 per cent.

Tracheotomy had to be resorted to, during the year, in 5 cases of Diphtheria. 2 of these cases died in spite of the operation, but 3, I am glad to say, recovered. Curiously, all these 3 came from Darfield. One of these last was moribund on admission, so that Dr. Fryer, who was at the Kendray Hospital when the child was admitted, had to operate single-handed. There was no time to send for assistance. Another child, less fortunate, died in the ambulance on the way to the Hospital. This death is, of course, not included in the above figures.

Of the 105 cases of Small-pox admitted to Lund Wood 5 died, giving a case fatality of 4·7.

The Lund Wood Hospital was closed from January 1st to January 12th, from 3rd February to 24th April, on August 9th, and from 9th September to 19th September, or 115 days out of 366.

Although the serious nature of the second Small-pox epidemic made it necessary that you should incur considerable expense in the matter of a disinfecting station, and preparing, if necessary, to provide additional accommodation at Lund Wood Hospital, there is one particular in which you are able to fight a Small-pox epidemic at much less cost than some other towns in South Yorkshire. One at least of the nurses who had

completed her training at the Kendray Hospital has since been earning £2 a week nursing Small-pox at Dewsbury. Nurses of similar standing with us receive £18 to £22 a year, and go to Lund Wood Hospital as a matter of course without any addition to their salaries. That this is possible is due to the fact that Miss Pauline, our excellent Matron, has built up a first-rate reputation for the training given at the Kendray Hospital, so that if it is a case of "Go to Lund Wood or leave," the nurse invariably selects the former alternative.

The difference in cost between four nurses at £2 a week each for 36 weeks, and 4 nurses at an average cost of just over 8s. a week for the same period, is sufficient evidence of the economy of our methods.

The most marked feature of the year at the Kendray Hospital has been the large number of cases (407) sent in from neighbouring districts. There was great pressure on our Scarlet Fever Wards during the months of August, September, and October; and the number of cases in Hospital has on more than one occasion been 110, occupying the full number of beds for which we have accommodation.

The cases sent in by the contributing districts were as follows:—Dodworth 91, Darfield 59, Worsbrough 43, Cudworth 32, Ardsley 31, Darton 33, Monk Bretton 41, Barnsley Rural 20, Wombwell 24, Royston 11, and Hoyland 22.

Naturally with so large a number of cases we have required a full staff of nurses, but we have never been over-staffed throughout the year; in fact on two or three occasions nurses have broken down through overwork. This is apt to happen if any one of the staff chances to fall ill, for then the rest of the staff are at once overworked. It is therefore only right that I should acknowledge the cheerful spirit with which the staff have risen to emergencies throughout the year.

Other Sanitary Work: Nuisances.

378 nuisances were reported during 1904, 355 were abated during the year, and the remainder were in hand at the beginning of 1905.

Food and Drugs.

There were 13 seizures of unsound food, and in three cases where such unsound food had been exposed for sale successful prosecutions followed.

88 samples of food and drugs were taken during the year. In two cases prosecutions followed, and were successful.

Smoke.

18 smoke observations were taken during the year, and 18 legal notices were served in this connetion, but no summonses were issued.

Special Inspections.

The 22 slaughter-houses in the Borough are inspected weekly; and during the year 52 canal boats, 12 common lodging-houses, 14 cowsheds, and 2 places where offensive trades are carried on, have been inspected.

New Buildings.

257 new houses have been built and certified during the year, also 3 shops and 3 workshops.

House to house Inspection.

During the year the House-to-house Inspector visited 3,331 houses. All the houses visited are entered in a register, with full details as to their sanitary condition.

Factories and Workshops.

6 factories, 45 workshops, 18 work-places, and 24 home-workers' premises (93 in all) have been inspected during 1904, 1 written notice has been issued, and 1 prosecution followed.

The following defects have been found and remedied:—

Want of cleanliness, 13 cases.

Want of ventilation, 4 cases.

Want of drainage of floors, 1 case.

Leaky ashpit, 1 case.

1 underground bakehouse was closed when a certificate had been refused.

1 bakehouse was found to be conducted under thoroughly insanitary conditions, and a successful prosecution followed.

2 underground bakehouses were in use at the beginning of 1904. To only one of them was a certificate granted, and this is now the only underground bakehouse in Barnsley.

4 lists of out-workers have been received from 4 firms.

14 cases of infectious disease have been notified in home-workers' premises; in 9 cases the work was apparel, in 5 "other work."

14 orders prohibiting home work in infected premises were issued. There are 158 workshops on the register at the end of the year.

Conclusion.

In conclusion I may remark that, except for Small-pox, 1904 has been a fairly satisfactory year, the death-rate being 1·90 below the average of the past 10 years, and the birth-rate only 1·38 below the average of the same ten years. It is only fair to Barnsley to point out that the nett increase per thousand of the population, that is to say the difference between the death-rate and the birth-rate is 15·77, while the nett increase per thousand for England and Wales is only 11·7, and that for the 103 smaller towns 11·9. Further the average nett increase for ten years is over 15. Barnsley does not contribute to that decrease of the birth-rate, which is causing so much alarm in many quarters. We have therefore a disproportionately large child population, among whom nearly half the deaths occur.

Were the birth-rate less, it would quite probably be found that the death-rate would be less also, but I am not prepared to say that such a condition of affairs would be unmixed good. It is, however, obvious that if, while the birth-rate is maintained, the death-rate could be diminished to the average of other towns, you would achieve a record to be proud of. It only remains for me to thank you for your generous and unstinted support in all the measures necessary for stamping out Small-pox, and to express the hope that the amount of re-vaccination that has taken place in consequence of the outbreak may protect us from a similar misfortune for many years.

I have the honour to be, Gentlemen,

Your obedient servant,

F. J. SADLER, M.A,, M.B., D.P.H. Oxon.,

Medical Officer of Health.

Barnsley,

March 17th, 1905.

Table I.

Vital Statistics of Whole District during 1904 and Previous Years.

Year.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.		Nett		Zymotic Death Rate.
				Under 1 year of age.		At all Ages.							Deaths under 1 year	Deaths under 5 years	
		Number.	Rate.*	Number.	Rate per 1,000 Births registered	Number.	Rate.*				Number.	Rate.*	Per cent. of total Deaths.		
1894	37500	1400	37·35	209	142·10	660	17·61	110	51	8	617	16·45	31·66	43·63	1·92
1895	38000	1459	38 39	336	230 30	978	25·73	113	43	9	944	24·84	34·35	54·41	6·68
1896	38500	1402	36·41	259	184·73	823	21·37	100	47	17	793	20·33	32·66	51·07	3·81
1897	39000	1436	36·82	281	195·68	846	21·69	119	58	14	802	20·56	35·03	50·30	4·17
1898	39500	1365	34·55	299	219·04	910	23·03	113	60	15	865	21·89	34·80	50·05	4·05
1899	40000	1353	33·82	224	165·55	792	19·80	107	47	22	767	19·17	28·28	43·43	3·22
1900	40500	1345	33·20	246	182 90	900	22·22	99	49	17	868	21·43	27·33	44·44	4·02
1901	41083	1489	36·24	286	192·06	936	22·78	123	50	25	911	22·15	30·55	44·18	5·40
1902	41800	1445	34·56	273	188·93	837	20·02	124	52	21	806	19·28	33·62	48·26	3·06
1903	42400	1575	37·14	276	175·24	895	21·10	119	66	16	845	19·92	32·66	48·99	3·79
Averages for years 1894-1903	39828	1423 9	35·84	268·9	187·64	857·7	21·53	112·7	52 3	16·4	821·8	20·59	32·08	48·26	4·00
1904	43700	1506	34·46	274	181·94	850	19·45	129	67	34	817	18·69	33·66	49·73	4·42

* Rates calculated per 1,000 of estimated population.
Area of District (exclusive of area covered by water), 2,386 acres.

Total population at all ages 41,083
Number of inhabited houses .. .. .. 8,563 } at census of 1901
Average number of persons per house .. .. 4·79

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, deaths in which have been distributed among the several localities in the District.
Beckett Hospital. Barnsley Union Workhouse.	Kendray Hospital for Infectious Diseases. Lund Wood Small-pox Hospital. West Riding Lunatic Asylums.	Royal Hospital, Sheffield. General Infirmary, Leeds. St. Anne's Convalescent Home, Bridlington. Wigan Workhouse. Goole Union Infirmary.

Is the Union Workhouse within the District? Yes.

Table II. (IV. of L. G. B.)

Causes of, and Ages at, Death in Barnsley during Year 1904.

Diseases.	At all Ages.	Under 1 year.	1—2	2—5	5—15	15—25	25—30	30—	40—	50—65	65—	70—	80—	Total Deaths in Public Institutions in the District.
Small-pox	5	2	1	...	...	...	...	1	...	...	1	...	...	...
Measles	23	1	10	12	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	11	1	1	4	5	...	...	...	...	...	...	...	...	...
Whooping Cough	27	13	7	7	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	9	2	3	2	2	...	...	...	...	...	...	...	...	...
Croup	3	...	...	3	...	...	...	...	...	...	...	...	...	...
Enteric Fever	19	1	...	...	4	6	3	3	1	1	...	...	...	...
Epidemic Influenza	3	...	...	...	...	1	...	...	...	...	...	2	...	...
Diarrhœa	99	80	17	...	...	...	...	...	...	1	...	1	...	1
Enteritis	2	1	...	...	...	...	...	1	...	...	...	...	...	...
Erysipelas	3	1	...	...	...	...	...	...	...	1	1	...	...	...
Other Septic Diseases	6	1	...	...	2	...	...	...	...	1	...	2	...	5
Phthisis	48	...	...	1	3	8	6	11	8	9	1	1	...	7
Other Tubercular Diseases	31	11	8	7	3	...	2	...	..	...	...	...	...	2
Cancer, Malignant Disease	33	...	...	...	1	1	1	2	6	12	4	4	2	7
Bronchitis	94	31	4	2	1	1	2	2	4	14	6	17	10	4
Pneumonia	31	6	5	4	...	1	1	3	2	5	1	3	...	...
Bronco-pneumonia, and other Diseases of the Respiratory Organs	35	12	12	3	...	...	...	2	3	3	...	...	...	1
Alcoholism and Cirrhosis of Liver	14	...	...	...	1	...	...	4	2	7	...	...	...	2
Venereal Diseases	6	6	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	36	36	...	...	...	...	...	...	...	...	...	...	...	...
Diseases and Accidents of Parturition	6	...	...	...	...	...	1	5	...	...	...	...	...	...
Heart Diseases	58	2	1	...	1	4	2	3	4	17	10	14	...	11
Accidents	18	1	1	3	2	1	...	5	...	3	...	2	...	33
Suicides	7	...	...	...	...	...	...	...	4	1	1	1	...	...
Acute Rheumatism	2	...	...	...	...	...	...	...	1	1	...	...	...	...
Diseases of Nervous System	74	34	5	1	2	1	2	2	2	13	4	6	2	20
Diseases of Digestive System	13	5	...	...	...	...	...	2	...	2	3	1	...	6
Diseases of Urinary & Generative Systems	26	...	...	...	...	...	1	2	6	9	5	2	1	4
Old Age	23	..	...	...	...	...	...	...	...	2	3	10	8	20
Marasmus and Debility	30	25	5	...	...	...	...	...	...	...	...	...	...	2
All other causes	22	3	2	...	3	...	...	1	3	6	2	1	1	4
All Causes	817	275	82	49	30	24	21	49	46	108	42	67	24	129

Table III.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1904.

NOTIFIABLE DISEASE.	Cases notified in whole District.							Total Cases Notified in each Locality.		No. of Cases removed to Hospital from each Locality.		
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Special Area.	W* Rest of Barnsley	Special Area.	Rest of Barnsley.	TOTAL.
Small-pox	89	2	10	6	11	58	2	16	73	16	73	89
Diphtheria	55	3	10	26	11	5	...	7	48	4	24	28
Membranous Croup ...	1	...	1	...	...	...	...	...	1	...	...	...
Erysipelas	38	2	1	1	3	25	6	6	32	...	...	...
Scarlet Fever	222	5	57	145	7	8	...	50	172	34	108	142
Enteric Fever	78	1	4	14	24	34	1	30	48	24	27	51
Puerperal Fever... ...	4	...	...	...	1	3	...	3	1	...	...	...
Chicken-pox ... ... (Notifiable from 11th May).	72	8	37	26	...	1	...	16	56	...	...	...
Totals	559	21	120	218	57	134	9	128	431	78	232	310

ISOLATION HOSPITALS .. { Kendray Hospital for Scarlet Fever, Typhoid Fever, and Diphtheria (in Ardsley).
Lund Wood Hospital for Small-pox (in Monk Bretton).

*W = Locality in which Workhouse is situated.

Table IV.

Deaths from Phthisis and Respiratory Diseases.

Class of Disease.	Total Deaths	Deaths per 1000 Persons living.	Percentage of Total Deaths.
Phthisis	48	1·09	5·87
Bronchitis...	94	2·15	11·51
Pneumonia	31	·71	3·79
Pleurisy	*nil*	*nil*	*nil*
Broncho-Pneumonia and other Respiratory Diseases	35	·80	4·28
Total.	208	4·75	25·45

Table V.

Shewing the number of Deaths from each of the Seven Principal Zymotic Diseases in the Eleven Years 1894 to 1904, omitting Deaths from other Sanitary Districts, but including Deaths from Barnsley in the Kendray and Lund Wood Hospitals.

Disease.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	Average Number of Deaths for 10 years.	Deaths in 1904.	Zymotic Death Rates, 1904.
Small-pox	..	..	..	..	..	..	..	..	2	1	·3	5	·11
Measles	..	54	19	15	22	29	37	62	19	56	31·3	23	·53
Scarlet Fever ..	11	16	24	22	1	9	14	18	6	2	12·3	11	·25
Diphtheria and Membran. Croup	4	7	8	1	4	7	19	10	19	9	8·8	9	·21
Whooping Cough..	1	17	48	4	37	3	26	13	11	21	18·1	27	·63
Enteric Fever ..	20	26	7	10	20	13	7	32	18	10	16·3	19	·44
Diarrhœa	36	134	41	111	76	68	58	87	53	62	72·6	99	2·25
Totals	72	254	147	163	160	129	161	222	128	161	159·7	193	4·42

Table VI.

Births and Deaths Registered; Deaths under 12 Months; and Number of Deaths from various Causes in each Month of the Year 1904; and also Deaths in Public Institutions.

1904.	Births.	Deaths.	Deaths under 1 Year.	Small-pox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Typhoid Fever.	Measles.	Whooping Cough.	Broncho-Pneumonia, Pleurisy, &c.	Influenza.	Phthsis.	Injuries.	Diarrhœa.	Public Institutions.
January ...	140	76	11	...	...	1	1	15	...	17	...	5	3	...	9
February...	132	86	14	...	2	1	3	3	1	26	1	5	4	1	11
March	124	69	21	...	...	...	1	2	...	16	1	4	2	...	17
April.....	123	54	14	...	2	1	3	1	2	8	...	5	2	1	6
May.....	134	60	26	...	2	2	...	...	4	12	...	1	4	...	7
June	98	49	18	2	...	...	...	...	3	10	...	4	2	2	11
July	115	68	24	...	1	...	1	1	6	13	...	1	6	10	13
August.....	133	135	66	...	1	1	1	...	7	9	...	5	6	64	20
September	133	63	27	...	...	...	5	...	2	6	...	2	4	14	8
October.....	119	59	21	1	1	...	2	1	1	8	...	5	1	5	6
November..	133	50	13	1	1	1	1	...	...	11	...	2	4	1	12
December..	122	81	19	1	1	2	1	...	1	22	1	8	4	2	9
				*	*	*	*								
Totals ...	1506	850	274	5	11	9	19	23	27	158	3	47	42	100	129

* The Columns marked with an asterisk give the corrected figures; Deaths in the Kendray and Lund Wood Hospitals being added.
The other Columns give Births and Deaths registered in the Borough.

Table VII.

Temperature and Rainfall in Barnsley in 1904.

Month.	Maximum.	Minimum.	Days on which 50° was reached.	Days on which 70° was reached.	Days of Frost.	Days on which 4 ft. Earth Thermometer registered. 56° or more.	Days on which Rain fell.	Amount in Inches.
January	50·5°	28°	2	...	12	...	19	2·44
February	49·5°	25°	0	...	13	...	23	4·04
March	59·5°	27·5°	7	...	10	...	20	2·03
April	61°	33·5°	27	...	...	...	15	1·46
May	71°	36°	29	1	...	...	20	3·20
June	73°	45°	30	3	...	...	11	1·10
July	79°	50°	31	21	...	19	11	1·68
August	81·5°	44°	31	10	...	25	16	3·92
September	70°	42°	30	1	...	14	12	·75
October	62°	35°	29	...	...	...	11	·42
November	57°	26·5°	11	...	6	...	19	1·19
December	54°	23·5°	7	...	13	...	15	1·41
Totals ...	...	...	234	36	54	58	192	23·64
Average for preceding 36 years ...			223·1	36·4	51·9	Av. for 12 yrs. 52·7	187·4	26·93

Table VIII.

SANITARY WORK DONE IN 1903.

Notices served for the Sanitary Amendment of Houses and Premises	378
Seizures of Unsound Meat and Food	13
Prosecutions for exposing Unsound Meat for Sale ...	3
Do. under Food and Drugs Act	2
Samples taken under the Sale of Food and Drugs Act ...	88
New Water Closets constructed	85
New Waste Water Closets	159
New Privy Ashpits	10
Cases of Infectious Disease Notified and Visited	559
Total Number of Cases isolated in the Kendray Hospital	628
Do. do. do. Lund Wood do.	105
Cases of Scarlet Fever isolated from Barnsley	142
Do. Enteric Fever do. do.	51
Do. Diphtheria do. do.	28
Do. Small-pox do. do.	89
Patients admitted to Kendray Hospital from other Districts	407
Do. Lund Wood do. do.	16

Tables A to D.

A Scarlet Fever Death Rates for 34 Years.

Years.	Scarlet Fever Death Rates.	Years.	Scarlet Fever Death Rates.	Years.	Scarlet Fever Death Rates.	Years.	Scarlet Fever Death Rates.
1871	·17	1881	·13	1891	·25	1901	·44
1872	·04	1882	1·24	1892	·24	1902	·14
1873	5·06	1883	·30	1893	·53	1903	·04
1874	2·80	1884	3·87	1894	·10	1904	·25
1875	·62	1885	1·71	1895	·40		
1876	·27	1886	1·52	1896	·59		
1877	·27	1887	1·78	1897	·54		
1878	·57	1888	·49	1898	·02		
1879	1·58	1889	·23	1899	·21		
1880	1·58	1890	·05	1900	·32		

B Scarlet Fever Statistics for 14 Years of Compulsory Notification.

Years.	Scarlet Fever Cases notified.	Percentage of Cases nursed at home with Case Fatality.		Percentage of Cases Isolated in Kendray with Case Fatality.		Percentage of Notifications under 5 years.	Percentage of Notifications 5 years and upwards.
1891	73	76·8	10·7	23·2	17·6	33	67
1892	112	92	7·7	8	11·1	31	69
1893	283	95·8	7	4·2	8·3	37	63
1894	240	85·5	3·9	14·5	8·5	44	56
1895	280	75	6·6	25	2·8	48	52
1896	326	47·3	6·4	52·7	8·1	41	59
1897	230	42·2	14·4	57·8	6	42	58
1898	99	11·2	0	88·8	1·1	26	74
1899	151	42·4	9	57·6	3·4	39	61
1900	297	26	14·28	74	1·37	34	66
1901	396	51·3	5·91	48·7	3·1	22	78
1902	346	41·4	2·79	58·6	·98	28	72
1903	105	39	4·8	61	0	35	65
1904	222	35·6	10	64·4	2·11	28	72

C NUMBER OF DEATHS IN BARNSLEY FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES DURING THREE DECADES, AND IN THE YEARS 1901—1904, INCLUDING DEATHS AT KENDRAY AND LUND WOOD HOSPITALS OF BARNSLEY RESIDENTS.

	Decade. 1871—1880	Decade. 1881—1890	Decade. 1891—1900	Years. 1901—1904
Small-pox	9	4	5	8
Measles	130	195	299	160
Diphtheria	23	58	65	47
Whooping Cough...	135	175	195	72
Typhoid	197	75	145	79
Diarrhœa	456	358	650	301
Scarlet Fever ...	**342**	**355**	**135**	**37**

D COMPARATIVE TABLE OF NOTIFICATIONS FOR PRECEDING TWELVE YEARS.

Year.	Small-pox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Erysipelas.	Puerperal Fever.	Typhoid Fever.
1892	43	112	57	29	2	11
1893	26	283	79	63	9	236
1894	5	240	51	39	4	125
1895	3	280	36	33	6	124
1896	1	326	52	26	10	76
1897	...	230	18	37	6	52
1898	...	99	18	33	2	133
1899	...	151	20	40	8	76
1900	...	297	47	28	9	87
1901	...	396	43	36	10	164
1902	15	346	52	39	11	86
1903	38	105	52	33	7	58
Average of preceding 10 years	6·2	247	38·9	34·4	7·3	98·1
1904	89	222	56	38	4	78

SMALL-POX.

RE-VACCINATION.

Small-pox has broken out in your neighbourhood.

Re-vaccination is the only sure preventive of Small-pox. Get **yourself** and **your family**

RE-VACCINATED AT ONCE.

Re-vaccination at worst may give you a bad arm for a week.

If you get Small-pox, **at the best** you will be detained in the Hospital for a **month,** you most likely will be disfigured for life, and quite possibly you may **die.**

DR. BLACKBURN, of Pitt Street,

will Re-vaccinate you for the asking, at no cost to yourself, either at your own house or his surgery as suits you best.

F. J. SADLER,

Medical Officer of Health.